

PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P23355PCT/AU	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/AU2004/001668	International filing date (<i>day/month/year</i>) 29 November 2004	Priority date (<i>day/month/year</i>) 28 November 2003	
International Patent Classification (IPC) or national classification and IPC Int. Cl. ⁷ F01L 9/02			
<p>Applicant BUSCHKUEHL, Thomas.Friedhelm</p>			

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. (*sent to the applicant and to the International Bureau*) a total of 5 sheets, as follows:

- sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
- sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. (*sent to the International Bureau only*) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input type="checkbox"/>	Priority
<input type="checkbox"/>	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input checked="" type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/>	Certain defects in the international application
<input type="checkbox"/>	Certain observations on the international application

Date of submission of the demand 28 September 2005	Date of completion of the report 13 October 2005
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer KURT TOBLER Telephone No. (02) 6283 2469

BEST AVAILABLE COPY

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/AU2004/001668

Box No. I Basis of the report

- 1 With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- This report is based on translations from the original language into the following language which is the language of a translation furnished for the purposes of:
- international search (under Rules 12.3 and 23.1 (b))
 - publication of the international application (under Rule 12.4)
 - international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):
- the international application as originally filed/furnished
- the description:
 pages 1-3, 5-16 as originally filed/furnished
 pages* 4, 4a received by this Authority on 28 September 2005 with the letter of 27 September 2005
 pages* received by this Authority on with the letter of
- the claims:
 pages as originally filed/furnished
 pages* as amended (together with any statement) under Article 19
 pages* 17-19 received by this Authority on 28 September 2005 with the letter of 27 September 2005
 pages* received by this Authority on with the letter of
- the drawings:
 pages 1-7 as originally filed/furnished
 pages* received by this Authority on with the letter of
 pages* received by this Authority on with the letter of
- a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
- 3 The amendments have resulted in the cancellation of:
- the description, pages
 - the claims, Nos.
 - the drawings, sheets/figs
 - the sequence listing (*specify*):
 - any table(s) related to the sequence listing (*specify*):
- 4 This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- the description, pages
 - the claims, Nos.
 - the drawings, sheets/figs
 - the sequence listing (*specify*):
 - any table(s) related to the sequence listing (*specify*):

If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/AU2004/001668

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims 1-15	YES
	Claims	NO
Inventive step (IS)	Claims 1-15	YES
	Claims	NO
Industrial applicability (IA)	Claims 1-15	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)

Claims 1-15 meet the criteria set forth in PCT Article 33(2) for novelty. The prior art published before the priority date does not disclose a reciprocating piston residing wholly within a housing, a connector passes through an aperture in said housing and the piston sealing with the housing prevent leakage through the aperture from the first and second reciprocating piston ends.

The prior art discloses pistons having rod connectors extending axially from the piston, hence the connectors are passing through one of the piston end chambers, requiring sealing means to prevent leakage from the one piston end.

The claimed invention is not obvious in the light of any of the cited documents nor is it disclosed in any obvious combination of them. It is also considered that it would not be obvious to a person skilled in the art in the light of common general knowledge either by itself or in combination with any of these documents.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/AU2004/001668

Box No. VI Certain documents cited

1. Certain published documents (Rule 70.10)

Application No. Patent No.	Publication date (<i>day/month/year</i>)	Filing date (<i>day/month/year</i>)	Priority date (valid claim) (<i>day/month/year</i>)
WO 2003/106820 A1	24 December 2003	31 January 2003	13 June 2002

2. Non-written disclosures (Rule 70.9)

Kind of non-written disclosure	Date of non-written disclosure (<i>day/month/year</i>)	Date of written disclosure referring to non-written disclosure (<i>day/month/year</i>)